

# SLS220 LINEAR DISPLACEMENT SENSOR

SLS220 linear displacement sensors have a 10mm or 20mm stroke range with a spring loaded operation and a mounting flange to allow easy installation. Contained within a high strength Nylatron® housing, this provides good chemical resistance and low weight. The internal potentiometer assembly is protected to IP66. Suited to OEM and process monitoring applications, this new sensor replaces Penny+Giles HLP220 model.

## PERFORMANCE

Electrical stroke E	mm	<b>10</b>	<b>20</b>
Resistance	kΩ	0.4 ±15%	0.8 ±10%
Independent linearity	±%	0.5	0.35
Power dissipation at 20°C	W	0.2	0.4
Applied voltage maximum	Vdc	8.9	17.9
Resolution		Virtually infinite	
Hysteresis (repeatability)		Less than 0.01mm	
Operational temperature	°C	-30 to +100	
Output smoothness		To MIL-R-39023 grade C 0.1%	
Insulation resistance		Greater than 100MΩ at 500Vdc	
Operating mode		Voltage divider only - see Circuit Recommendation below	
Wiper circuit impedance		Minimum of 100 x track resistance or 0.5MΩ (whichever is greater)	
Operating force maximum	kgf	4.0	
Life at 250mm per second		Typically greater than 20 million operations (10 x 10 <sup>6</sup> cycles)	
Sealing		Internally sealed to IP66 (spring loaded plunger is unsealed, so care must be taken when selecting for environments which have a risk of particle contamination)	
Shaft velocity maximum	m/s	2.5	

## CIRCUIT RECOMMENDATION

Hybrid track potentiometers feature a high wiper contact resistance, therefore operational checks should be carried out only in the voltage divider mode. Hybrid track potentiometers should be used only as voltage dividers, with a minimum wiper circuit impedance of 100 x track resistance or 0.5MΩ (whichever is greater). Operation with wiper circuits of lower impedance will degrade the output smoothness and affect the linearity.

## AVAILABILITY

All standard configurations can be supplied rapidly from the factory - check with your local supplier for more details

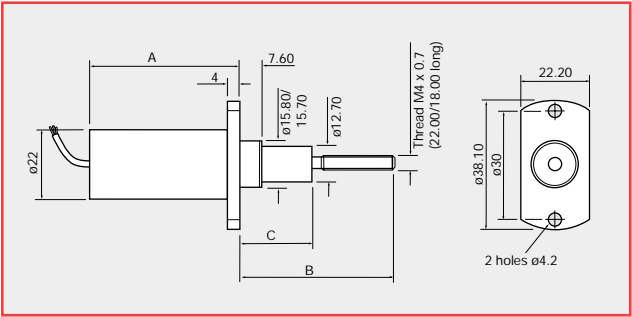
## ORDERING CODES

SLS220/...../.....

Electrical stroke 
↑
 
↑
 Resistance

DIMENSIONS

Note: drawings not to scale



Electrical stroke E	mm	10	20
Mechanical stroke M	mm	12.5	22.5
Body length A	mm	44.4	54.4
Shaft extended - B	mm	43	53
Shaft extended - C	mm	20	30
Weight approximate	g	45	50

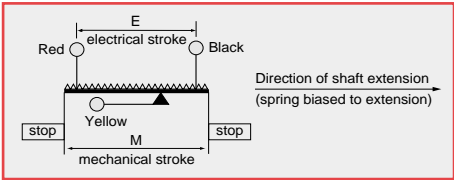
Note: Nominal shaft position is fully extended (spring loaded)

MATERIALS

Body	Nylatron® MC901 (blue)
Shaft	Stainless steel

ELECTRICAL CONNECTIONS

3 core cable: PUR sheathed 0.3m long with PTFE insulated 7/0.125 cores.





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